



J&J-1500

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Axel Friese et al.  
Serial No.: 124,374 Art Unit: 3308  
Filed : September 20, 1993 Examiner: K. Reichle  
For : TAMPON, ESPECIALLY FOR FEMININE HYGIENE, AND A  
PROCESS AND APPARATUS FOR PRODUCING THIS

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

DECLARATION UNDER 37 C.F.R. §1.132

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Dear Sir:

Helena Engqvist, declares as follows:

1. I am employed by Johnson & Johnson Worldwide Absorbent Products and Materials Research division of McNeil-PPC, Inc., in Milltown, New Jersey. My current position is that of Director Research & Development, Internal Sanitary Protection. I received a Master of Science degree in Chemical Engineering from Chalmers University of Technology, Gothenburg, Sweden in 1977. I received an Executive Master of Business Administration degree from Gothenburg School of Economics, Gothenburg, Sweden in 1992. I have been employed by McNeil-PPC, Inc. since April 1994. Between July 1991 and March 1994, I was employed by Johnson & Johnson GmbH in Dusseldorf, Germany, as Director, Research & Development with responsibilities in Internal Sanitary Protection and other areas. Between January 1978 and June 1991, I was employed by Molnlycke AB in Gothenburg, Sweden, having various positions including Project Manager and Manager, Research & Development with responsibilities in Feminine Hygiene Products, nonwoven fabrics and other areas. Between October 1976 and December 1977, I was employed as a Research Engineer at the Textile Research Institute in Gothenburg, Sweden.

Considered  
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2. I have worked in the area of internal sanitary protection for 5 years. During that time, I have become familiar with processes for making tampons. Tampons are often formed by first obtaining a mass of resilient, nonwoven fibers called a tampon blank, e.g., a rolled fibrous batt. This blank is relatively uncompressed and has a relatively low fiber density. The blank is then compressed to form a finished product having overall dimensions less than those of the blank. When pressure is released after moderate mechanical compression, a tampon tends to expand toward its original dimensions. Therefore, tampon blanks are generally over-compressed, i.e., made more dense than desired in the final product. Over-compression mechanically constricts expansion to prevent the tampon from fully expanding without added moisture. However, even over-compressed tampons will expand to some degree. The expansion after over-compression is least in areas of greatest compression and greatest in areas of lowest compression.

3. I have read U.S. Patent Application Serial No. 124,374, entitled "Tampon, especially for Feminine Hygiene, and a Process and Apparatus for Producing This". The specification of this application discloses at least one method of forming the tampons claimed therein. This method includes (1) compressing a tampon blank to form an intermediate product having longitudinal ribs and outwardly open longitudinal grooves and (2) forcing the intermediate product through a forming die having an entry orifice diameter corresponding to the diameter of the intermediate product and an exit orifice diameter corresponding to the final diameter of the finished tampon, e.g., about 13 to 15 mm, to subject the longitudinal ribs to a radial pressure to slightly reduce the diameter of the intermediate product, producing a finished tampon product.

4. The manufacture of commercial tampons from substantially uncompressed tampon blanks includes several variables including the

mass of fibers in the tampon blank, whether the tampon blank is centered within the forming press, the pressure applied to the blank, and the degree and location of post-compression expansion.

5. In tampons of the invention claimed in U.S. Patent Application Serial No. 124,374, the fibers forming the outer ends of the longitudinal ribs are generally exposed to the lowest compression forces. The specification discloses that the ribs may be formed in an intermediate product having a diameter of about 20 mm. The intermediate product may then be subjected to a diameter-reducing pressure in a forming die having an entry orifice diameter about that of the intermediate product and a smaller exit orifice diameter, e.g., corresponding to the final diameter of the finished tampon of about 13 to 15 mm. The finished tampon is then released from these compressions. After release from these compressions, the ends of the ribs tend to expand. This expansion is somewhat variable, and the degree to which the outer portions of the longitudinal grooves will be closed is variable. They may expand sufficiently to touch each other peripherally as set forth in Fig. 4, or they may not expand to that extent and may appear as depicted in Fig. 2. Thus, a tampon formed according to the teachings of the specification will have longitudinal grooves, the outer ends of which may be open, closed or some combination of both open and closed.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Date:

8/17/94

By:

Helena Engqvist

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